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SEQUENCE LISTING

<110> Novopharm Biotech Inc.

<120> ENHANCED PHAGE DISPLAY LIBRARIES AND METHODS FOR
PRODUCING SAME

<130> 33956-41

<140> PCT

<141> 2000-09-07

<150> CA2282179

<151> 1999-09-07

<150> US60/163,546

<151> 1999-11-04

<160> 60

<170> PatentIn Ver. 2.1

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Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Val
  35              40              45

Ser Ala Ile Ser Ser Asn Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
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Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
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Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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Thr Val Ser Ser
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<220>
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<210> 16
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gagtct 66

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<213> Artificial Sequence

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<223> Description of Artificial Sequence:primer

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<211> 396
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<213> human (modified)

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gcagactccg tgaagggcag attcaccatc tccagagaca attccaagaa cactctgtat 240
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<213> human (modified)

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20 25 30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Glu Arg Glu Gly Val
35 40 45
Ser Ala Ile Ser Ser Asn Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Ala Asp Arg Leu Lys Val Glu Tyr Tyr Asp Ser Ser Gly Tyr Tyr
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Val Ser Arg Phe Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Thr Val
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Thr Val Ser Ser
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<210> 38
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<213> human (modified)

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gcagactccg tgaagggcag attcaccatc tccagagaca attccaagaa cactctgtat 240

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<213> human (modified)

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Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Val
35 40 45
Ser Ala Ile Ser Ser Asn Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Val Lys Asp Arg Leu Lys Val Glu Tyr Tyr Asp Ser Ser Gly Tyr Tyr
100 105 110
Val Ser Arg Phe Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Thr Val
115 120 125
Thr Val Ser Ser
130

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<212> PRT
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<400> 41

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1 5 10 15

Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Glu Arg Glu Gly Val
35 40 45

Ser Ala Ile Ser Ser Asn Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Asp Arg Leu Lys Val Glu Tyr Tyr Asp Ser Ser Gly Tyr Tyr
100 105 110

Val Ser Arg Phe Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Thr Val
115 120 125

Thr Val Ser Ser
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<210> 42

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<212> DNA

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cttcaaata gacgtctgag agctgaggac acggctgtgt attactgtgc agcagacagg 300
ttaaagtg agtactatga tagttgcggt tattacgttt ctcggttcgg tgcttttgat 360
atctggggcc aagggacaac ggtcaccgct tcatca 396

<210> 43

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<212> PRT

<213> human (modified)

<400> 43

Glu Val Gln Leu Gln Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Cys Met His Trp Val Arg Gln Ala Pro Gly Lys Glu Arg Glu Gly Val
35 40 45

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Ser Ala Ile Ser Ser Asn Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Ala Asp Arg Leu Lys Val Glu Tyr Tyr Asp Ser Cys Gly Tyr Tyr
100 105 110

Val Ser Arg Phe Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Thr Val
115 120 125

Thr Val Ser Ser
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gcagactccg tgaagggcag attcaccatc tccagagaca attccaagaa cactctgtat 240
cttcaaatga gcagtctgag agctgaggac acggctgtgt attactgtgt gaaagacagg 300
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atctggggcc aagggacaac ggtcaccgtc tcatca 396

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<212> PRT
<213> human (modified)

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1 5 10 15

Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Val
35 40 45

Ser Ala Ile Ser Ser Asn Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Val Lys Asp Arg Leu Lys Val Glu Tyr Tyr Asp Ser Ser Gly Tyr Tyr
 100 105 110

Val Ser Arg Phe Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Thr Val
 115 120 125

Thr Val Ser Ser
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<213> Artificial Sequence

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<223> Description of Artificial Sequence:recombinant
 A6-derived peptide

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Glu Tyr Lys Asp Phe Asp Ile
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<210> 47

<211> 23

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<223> Description of Artificial Sequence:recombinant
 A6-derived peptide

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Asp Tyr Lys Glu Phe Asp Ile
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<211> 23

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:recombinant
 A6-derived peptide

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Ser Tyr Lys Met Phe Asp Ile

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 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:recombinant
 A6-derived peptide

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Gly Tyr Lys Trp Phe Asp Ile
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 <223> Description of Artificial Sequence:recombinant
 A6-derived peptide

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Asp Tyr Lys His Phe Asp Ile
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 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:recombinant
 A6-derived peptide

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Asp His Val Gln Phe Asp Ile
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 <211> 23
 <212> PRT
 <213> Artificial Sequence

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<223> Description of Artificial Sequence:recombinant
A6-derived peptide

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Leu Ser Gly Gln Asn Tyr Thr Lys Thr Arg Cys Leu Val Met Gln Asn
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Asp Tyr Lys Met Phe Asp Ile
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<210> 53

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:recombinant
A6-derived peptide

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Thr Ala Glu Pro Ala Leu Ser Pro Gln Ala Cys Met Thr Lys Glu Arg
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Gln Tyr Lys Asp Phe Asp Ile
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<210> 54

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:recombinant
A6-derived peptide

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Glu Thr Tyr Met Tyr Thr Arg Gly Lys Tyr Cys Arg Ala Leu Ser Ala
1 5 10 15

Asp Tyr Lys Leu Phe Asp Ile
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<210> 55

<211> 23

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A6-derived peptide

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Asp Tyr Lys Leu Phe Asp Ile
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A6-derived peptide

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Asp Tyr Lys Lys Phe Asp Ile
20

<210> 57
<211> 23
<212> PRT
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<220>
<223> Description of Artificial Sequence:recombinant
A6-derived peptide

<400> 57
Gly Arg Tyr Phe Gln Ser Lys Ile Thr Ser Cys Glu Asn Asn Asp Arg
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Asp Tyr Lys Leu Phe Asp Ile
20

<210> 58
<211> 23
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<220>
<223> Description of Artificial Sequence:recombinant
A6-derived peptide

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Glu Tyr Lys Asp Phe Asp Ile
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<210> 59
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<223> Description of Artificial Sequence:primer

<400> 59

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<210> 60

<211> 54

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:primer

<400> 60

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54